

Udoji Maratha Boarding Campus, Near Pumping Station, Gangapur Road, Nashik-13. <u>RSM POLY</u> Affiliated to MSBTE Mumbai, Approved by AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra, Mumbai.

#### Newsletter Published Monthly

Vol: II, Issue: 6

## **RSM POLY NEWSLETTER – JULY 2020**

## ABOUT MVP SAMAJ

The **Maratha Vidya Prasarak Samaj** is one of the most prestigious centers of learning in the State of Maharashtra. It manages 485 educational units and is one of the premier educational hubin the Nashik district.

At present, more than 2 lakhs of students are pursuing education. Over past 105 years, the institute has stood the test of time to become legend of unparalleled stature. History says that the credit for the birth of M.V.P. Samaj goes to the young, enthusiastic & devoted team of social workers and educationists who were inspired by the lives of Mahatma Jyotiba Phule, Savitribai Phule and Rajarshi Shahu Maharaj of Kolhapur. These young leading lights include Karmaveer Raosaheb Thorat, Bhausaheb Hire, Kakasaheb Wagh, Annasaheb Murkute, Ganpat Dada More, D. R. Bhonsale, Kirtiwanrao Nimbalkar and Vithoba Patil Khandalaskar, who laid the foundation of the Samaj. They were the men who envisioned the culture and knowledge centric society. The great visionaries of MVP Samaj rightly laid the "Wellbeing and happiness of masses" as the motto for the samaj.

## ABOUT RSM POLYTECHNIC

The **Rajarshi Shahu Maharaj Polytechnic** has been established in the year 2008, at the central place in Nashik. It is affiliated to MSBTE, Mumbai and approved by Government of Maharashtra, DTE Mumbai and the AICTE, New Delhi. The Polytechnic is in the process of Accreditation and Gradation. The Polytechnic has well-equipped and well-furnished laboratories, workshop and hostel facilities. Every department has separate computational facilities along with LAN, Wi-Fi and necessary software. At present the RSM Polytechnic provides three-year courses leading to Diploma in Engineering of MSBTE, Mumbai in the five disciplines: Mechanical Engineering, Computer Technology, Electronics and Telecommunication Engineering, Information Technology and Electrical Engineering.

## VISION AND MISSION

### VISION:

• To Empower the Common Masses by providing Quality Technical Education.

### **MISSION:**

- To create and implement innovative best practices to achieve academic excellence.
- To enhance the overall development of students by imparting essential skills.
- To inculcate principles of professional activities by promoting industry institute interaction and entrepreneurial skills.
  - To create an environment awareness for sustainable development.



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## **MVP RSM Polytechnic**

 Online FDP on Mathematics: A Practical Approach in Science & Technology (28<sup>th</sup> June 2020 to 3<sup>rd</sup> July 2020)



The Online FDP on Mathematics: A Practical Approach in Science & Technology was attended by Prof. T. K. Thange and Prof. V. R. Patil. It was organized by DIEMS, Aurangabad.

 Online FDP on Joseph's Virtual Health Care (29<sup>th</sup> June 2020 to 4<sup>th</sup> July 2020)



The Online FDP on Joseph's Virtual Health Care Week 2k20 was attended by Prof. P. V. Patil, Prof. D. B. Mogal, Prof. S. P. Jagtap and Mrs. K. B. Holkar. It was organized by St. Joseph's COE, Chennai.

 Online FDP on German language for beginner's level-A1 (29<sup>th</sup> June 2020 to 4<sup>th</sup> July 2020)



The Online FDP on German language for beginner's level-A1 was attended by Prof. P. V. Patil. It was organized by Dept. of Information Technology, NITTT, Nagpur.

 Online FDP on Advanced Materials and Mathematical Tools (3<sup>rd</sup> July 2020 to 4<sup>th</sup> July 2020)

	MAHATMA GANDHI INSTITUTE OF TECHNOLOGY Right Willings, Gardent, Hyderabad, Telengara - 500/75, www.rrgt.ac.in						
	<b>Certificate of Participation</b>						
	This is to certify that Ms. Varsha Rangrao Patil , MVPS's Rajarshi Shahu Maharaj Polytechnic, Nashik						
1	has actively participated in the Two Day Online FDP on "Applications of Mathematics in						
1	Engineering" organized by Department of Mathematics & Humanities, Mahatma Gandhi Institute of						
I	Technology (MGIT), Hyderabad during 3rd and 4th July 2020.						
1	Dechty Martin Banuar 2.						
	Dr.S.Raji Reddy Dr.M.VRamana Murthy Dr. K. Jaya Sankar Convener HoD Principal						

The Online FDP on Advanced Materials and Mathematical Tools was attended by



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Prof. V. R. Patil and. It was organized by MGIT, Hyderabad.

 Online STTP on Introduction of Accreditation Mechanism NBA Approach (6<sup>th</sup> July to 10<sup>th</sup> July 2020)



The Online STTP on Introduction of Accreditation Mechanism NBA Approach was attended by Prof. V. R. Patil of Science & Humanity Department. It was organized by NITTTR, Kolkata.

 Online FDP on Advanced Materials and Mathematical Tools (10<sup>th</sup> July 2020 to 14<sup>th</sup> July 2020)



The Online FDP on Advanced Materials and Mathematical Tools was attended by Prof. T. K. Thange and Faculties of Science & Humanity Department. It was organized by Department of First Year Engineering in association with IQAC Cell, GWCET, Nagpur.  Online STTP on Applications of Mathematical Sciences (13<sup>th</sup> July 2020 to 18<sup>th</sup> July 2020)



The Online STTP on Applications of Mathematical Sciences was attended by Prof. V. R. Patil of Science & Humanity Department. It was organized by KDK College of Engineering, Nagpur in Association with ISTE, New Delhi.



Academy, Pune of different companies.



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Mechanical Engineering Department			Computer Technology Department		
SN	Activities	Date(s)	SN	Activities	Date(s)
1	Webinar on New Product Design & Development	1 <sup>st</sup> July 2020	1	Online Lectures started	15 <sup>th</sup> July 2020
2	Webinars in Refrigeration week on the eve of world refrigeration	26 <sup>th</sup> June to 1 <sup>st</sup> July 2020	P	22	
3	Webinar on MOODLE: Online teaching Management Tool	6 <sup>th</sup> July 2020			5
4	Online FDP on Auto CAD Designing S/w	6 <sup>th</sup> July to 11 <sup>th</sup> July 2020	2		4
5	Online Lectures	15 <sup>th</sup> July 2020	M		
E & TC Engineering Department			Electrical Engineering Department		
1	Online Lectures	15 <sup>th</sup> July 2020	1	Online Lectures	15 <sup>th</sup> July 2020
Infor	mation Technology Depa	rtment	Department of Science and Humanity		
1	Webinar on Network with Cisco router & switches	10 <sup>th</sup> July 2020	1	FDP on Mathematics: A Practical Approach in Science	28 <sup>th</sup> June to 3 <sup>rd</sup> July 2020
2	Webinar on Artificial Intelligence	13 <sup>th</sup> July 2020	2	FDP on Joseph's Virtual Health Care	29 <sup>th</sup> June to 4 <sup>th</sup> July 2020
3	Webinar on Cyber Security	14 <sup>th</sup> July 2020	3	FDP on German language for Beginner	29 <sup>th</sup> June to 4 <sup>th</sup> July 2020
4	Webinar on 3D Printing: The Key to 4th Industrial Revolution	15 <sup>th</sup> July 2020	4	Online FDP on Advanced Materials and Mathematical	3 <sup>rd</sup> July and 4 <sup>th</sup> July 2020
5	Webinar on Quantum Computing	16 <sup>th</sup> July 2020	5	STTP on Introduction of Accreditation Mechanism NBA	6 <sup>th</sup> July to 10 <sup>th</sup> July 2020
6	Online Lectures	15 <sup>th</sup> July 2020	6	FDP on Advanced Materials and Mathematical Tools	10 <sup>th</sup> July to 14 <sup>th</sup> July 2020
			7	STTP on Applications of Mathematical Sciences	13 <sup>th</sup> July to 18 <sup>th</sup> July 2020
			8	Organized Online Pool Campus Interview	23 <sup>rd</sup> July 2020

## **NEWSLETTER: JULY 2020**



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## **Department of Mechanical Engg.**

- 1. Workshops/Seminars/FDPs/IVs
- Webinar on New Product Design & Development (1<sup>st</sup> July 2020)



The webinar on New Product Design & Development was attended by Prof. M. S. Gaidhani. It was organized by SGOI COE, Belhe, Junnar, Pune.

 Webinars in Refrigeration week on the eve of world refrigeration (26<sup>th</sup> June to 1<sup>st</sup> July 2020)



The webinar on Webinars in Refrigeration week on the eve of world refrigeration was attended by Prof. M. S. Gaidhani. It was organized by ISHRAE Nashik Chapter.



Webinar on MOODLE: Online teaching

The webinar on MOODLE: Online teaching management tool was attended by Prof. M. S. Gaidhani. It was organized by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

 Online FDP on Auto CAD Designing Software (6<sup>th</sup> July to 11<sup>th</sup> July 2020)



The Online FDP on Auto CAD Designing Software was attended by Prof. M. S. Gaidhani. It was organized by MGM's Polytechnic, Aurangabad.

 Online Lectures started by Mechanical Dept. from 15<sup>th</sup> June 2020 through online mode. (15<sup>th</sup> July 2020)

**Prof. B. S. Deshmukh and faculties started** online lectures for SYME and TYME students for next Academic Year through



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online mode due to Covid 19 pandemic and lockdown situation. It was started from 15<sup>th</sup> June 2020.

#### **Department of Computer Technology 1. Workshops/Seminars/FDPs/IVs**

 Online Lectures started by Computer Dept. from 15<sup>th</sup> June 2020 through online mode. (15<sup>th</sup> July 2020)



Prof. P. D. Boraste and faculties started online lectures for SYCM and TYCM students for next Academic Year through online mode due to Covid 19 pandemic and lockdown situation. It was started from 15<sup>th</sup> June 2020.

## **Department of Info. Technology**

- 1. Workshops/Seminars/FDPs/IVs
- Webinar on Network with Cisco router & switches (10<sup>th</sup> July 2020)



The webinar on Network with Cisco router & switches was attended by Prof. V. K. Khedkar, Prof. A. P. Patil, Prof. S. S. Tile, Prof. S. S. Rajole and Mrs. R. V. Shinde. It was organized by Mrs. Vinayashree S. Akkalkot.

• Webinar on Artificial Intelligence (13<sup>th</sup> July 2020)



The Webinar on Artificial Intelligence was attended by Prof. S. S. Rajole and Mrs. R. V. Shinde. It was organized by K. J. Somaiya Institute of Engineering and Information Technology, Mumbai.





The Webinar on Cyber Security was attended by Prof. S. S. Rajole and Mrs. R. V. Shinde. It was organized by K. J. Somaiya Institute of Engineering and Information Technology, Mumbai.

### Webinar on 3D Printing: The Key to 4<sup>th</sup> Industrial Revolution (15<sup>th</sup> July 2020)



The Webinar on 3D Printing: The Key to 4th Industrial Revolution was attended by Prof. S. S. Rajole. It was organized by K. J. Somaiya Institute of Engineering and Information Technology, Mumbai.

 Webinar on Quantum Computing (16<sup>th</sup> July 2020) K. J. Somaiya Institute of Engineering and Sugar INFORMATION TECHNOLOGY, SION, MUMBAI edited by NAAL with 'A Grade edited by National Board of Accreditation by University of Mumbal, ISTEIMHI and CSI Three Programs Accredite Best College Award by Un CERTIFICATE OF PARTICIPATION Shinde Rupa Vinod has actively participated in the National-Level Webinar on QUANTUM COMPUTING held on July 16, 2020 Organized By Department of ELECTRONICS & TELECOMMUNICATION during National-Level Webinar Series or EMERGING AREAS OF TECHNOLOGY Ð Jayaluat all ali Dr. Jayashre shree Khanapur Dr. Sunite Patil Vice Principal sh Ukarande

The Webinar on Quantum Computing was attended by Prof. S. S. Rajole and Mrs. R. V. Shinde. It was organized by K. J. Somaiya Institute of Engineering and Information Technology, Mumbai.

 Online Lectures started by Information Technology Dept. from 15 June through Online mode. (15<sup>th</sup> July 2020)

Prof. V. K. Khedkar and faculties started online lectures for SYIF and TYIF students for next Academic Year through online mode due to Covid 19 pandemic and lockdown situation.



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**RSM in News:** 

### **Department of Electrical Engg.**

- 1. Workshops/Seminars/FDPs/IVs
- Online Lectures started by Electrical Engg. Dept. from 15<sup>th</sup> June 2020 through online mode. (15<sup>th</sup> July 2020)

Prof. D. S. Pagar and faculties started online lectures for SYEE and TYEE students for next Academic Year through online mode due to Covid 19 pandemic and lockdown situation. It was started from 15<sup>th</sup> June 2020.

### **Department of E & TC Engg.**

 Online Lectures started by E & TC Engg. Dept. from 15<sup>th</sup> June 2020 through online mode. (15<sup>th</sup> July 2020)



Prof. S. N. Shelke and faculties started online lectures for SYEJ and TYEJ students for next Academic Year through online mode due to Covid 19 pandemic and lockdown situation. It was started from 15<sup>th</sup> June 2020.







नाशिक : मविप्र संचलित राजर्षी शाहू महाराज तंत्रनिकेतनमध्ये वृक्षारोपण करताना शिक्षकवृंद.

शाहू पॉलिटेक्निकमध्ये वृक्षारोपणा नाशिक: मविप्र संचलित राजपीं शाहू महाराव तंत्रनिकेतनमध्ये हरित सप्ताहाचे औवित्य साधून महाविद्यालयाच्या आवारात वृश्वारोपण करण्यात आले. इमारतीच्या आवारात फिनिकल डिस्टन्स राखून वृश्वलागवड करण्यात आली. तंत्रनिकेतनचे प्राचार्य डॉ. डी. बी. उफाडे यांच्या मार्गदर्शनाखाली संवर्धन करण्याची जवाबदारी निश्चित करण्यात आली. या उपक्रमाचे संस्थेचे अध्यक्ष डॉ. तुपार शेवाळे, सर्साचटणीस नीलिमा पवार, चिटणीस डॉ. सुनील ढिकले, सभापती माणिक वोरस्ते, उपसभापती राघो अहिंर, शिक्षणाधिकारी डॉ. एन. एस. पाटील आर्टीनी कौत्तक केले आहे.

Gavkari, Dt. 14<sup>th</sup> July 2020, Page No.3

लक्ष महाराष्ट्र

शनिवार, दि. २५ जुलै २०२०

## राजर्षी शाहू महाराज तंत्रनिकेतनमध्ये ३८ विद्यार्थ्यांची बहुराष्ट्रीय कंपनीमध्ये निवड

#### नाशिक । प्रतिनिधी

म.वि.प्र. समाज संचलित राजर्षी शाह् महाराज पॉलिटेक्निकमध्ये गुरुवारी (दि.२३) झेडएफ इंडिया चाकण, दाना इंडिया हिंजवाडी, डीएमआय अँड पलश इलेक्ट्रॉनिक्स चाकण याच्या संयुक्त विद्यमाने कुम अँप (Zoom App) द्वारा ऑनलाईन कॅम्पस ड्राईल्हचे आयोजन करण्यात आले. या कॅम्पसमध्ये मेकॅनिकल, इलेक्ट्रिकल, इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन डिप्लोमाचे २०१८, २०१९ आणि २०२० मध्ये उत्तीर्ण झालेल्या विद्यार्थ्यांची चाकण स्थित बहुराष्ट्रीय कंपन्यातर्फे ऑनलाईन मुलाखती घेण्यात आल्या.

सर्व तंत्रनिकेतनच्या ८७ विद्यार्थ्यांची ऑनलाईन मुलाखती घेण्यात आल्या. सर्व निकष पार करून राजर्षी शाह महाराज पॉलिटेक्निकच्या एकूण ३८ आणि इतर कॉलेजचे २२ विद्यार्थ्यांची निवड झाली. निवड झालेल्या विद्यार्थ्यांचे संस्थेचे अध्यक्ष डॉ. तुषार शेवाळे, सरचिटणीस श्रीमती निलीमाताई पवार, सभापती माणिकराव बोरस्ते, चिटणीस डॉ. सुनिल ढिकले, उपसभापती राघो अहिरे, संचालक मंडळ, शिक्षणाधिकारी डॉ.नानासाहेब पाटील यांनी अभिनंदन केले आहे. ऑनलाईन कॅम्पस ड्राईव्हसाठी प्राचार्य डॉ.डी.बी. उफाडे, ट्रेनिंग व प्लेसमेंट ऑफिसर प्रा.योगेश कोढीलकर आणि प्रा.ए.पी. पाटील, प्रा.एस.एस. आहेर आणि सर्व शिक्षकांचे मार्गदर्शन लाभले.

Lakshya Maharashtra, Dt. 25<sup>th</sup> July 2020 Page No.3



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गांवकरी | शहर - जिल्हा 🔳 नाशिक, शनिवार दि. २५ जुलै २०२०

## शाह महाराज तंत्रनिकेतनमध्ये ३८ विद्यार्थ्यांची निवड

नाशिक : प्रतिनिधी

म.वि.प्र. समाज संचलित राजर्षी शाह महाराज पॉलिटेक्निकमध्ये झेडएफ इंडिया चाकण, दाना इंडिया हिंजवाडी, डीएमआय अँड फ्लश डॉ सुनिल ढिकले,उपसभापती राघो इलेक्टॉनिक्स चाकण याच्या संयक्त विद्यमाने झूम औप द्वारे घेण्यात डॉ.नानासाहेब पाटील यांनी अभिनंदन ऑनलाईन कॅम्पस ड्राईव्ह घेण्यात आला. यात ३८ विद्यार्थ्यांची निवड करण्यात आली

मेकॅनिकल, इलेक्ट्रिकल, इलेक्टॉनिक्स ॲण्ड टेलिकम्यनिकेशन डिप्लोमाचे २०१८, २०१९ आणि २०२० मध्ये उत्तीर्ण झालेल्या विद्यार्थ्यांची चाकण बहराष्ट्रीय कंपन्यातर्फे तसेच अधिकाऱ्यांनी नाशिक विभागातील सर्व तंत्रनिकेतनच्या ८७ विद्यार्थ्यांची ऑनलाईन मलाखती घेतल्या, सर्व निकथ पार करून राजधीं शाह् महाराज रोजी ठीक ११ वा. करण्यात पॉलिटेविनकच्या एकण ३८ आणि इतर कॉलेजच्या २२ विद्यार्थ्यांची निवड

झाली. निवड झालेल्या विद्यार्थ्यांचे डी.बी.उफाडे यांच्या मार्गदर्शनाखालें संस्थेचे अध्यक्ष डॉ त्षार शेवाळे, सरचिरणीस श्रीमती निलीमाताई पवार. सभापती माणिकराव बोरस्ते,चिटणीस अहिरे, संचालक मंडळ, शिक्षणाधिकारी केले आहे. ऑनलाईन कॅम्पस ड्राईव्हसाठी प्राचार्य डॉ.डी.बी.उफाडे, ट्रेनिंग व प्लेसमेंट ऑफिसर प्रा.योगेश कोढीलकर आणि प्रा.ए.पी.पाटील, प्रा.एस.एस.आहेर आणि सर्व शिक्षकांचे मार्गदर्शन लाभले. तंत्रज्ञानाची माहिती

स्थित ऑनलाईन पद्धतीने विद्यार्थ्यापर्यंत पोहोचण्याकरिता मविप्र संचलित राजपीं शाह महाराज तंत्रनिकेतनतर्फे ऑनलाईन करिअर गाईडन्सचे आयोजन रविवार दि.२६ जुलै आले आहे तंत्रनिकेतनचे प्राचार्य डॉ.

इयता १० वी,१२ वी नंतर पृढील योग्य वाटचालीसाठी इंजिनिअरिंग पदविका (डिप्लोमा) प्रवेशाविषयी तसेच तांत्रिक शिक्षणाचे महत्व. हिप्लोमा जंतर अमणाऱ्या विविध क्षेत्रातील वाटचाली या विषयावर माहिती देण्यात येणार आहे. त्यासाठी विद्यार्थ्यांना अगोदर नावनोंदणी आवश्यक आहे.उपक्रमासाठी गुगल मिट या औंप द्वारे जॉईन व्हायचे आहे. नावनोंदणी व कार्यक्रम जॉईन करण्यासाठी खालील लिंकचा वापर करा.

नावनोंदणी लिंक : https://forms.gle Czh4zd9RLW4swH3 कार्यक्रम जॉर्डन करण्याची लिंक httpp:// meet.google. com?xzc-mdos-

## Gavkari Dt. 25<sup>th</sup> July 2020, Page No.2



#### राजर्षी शाह महाराज तंत्रनिकेतनतर्फे ऑनलाईन करिअर मार्गदर्शन

येणाऱ्या कोळात तंत्रज्ञानाची माहिती ऑनलाईन पद्धतीने विद्यार्थ्यापर्यंत पोहोचण्याकरिता मराठा विद्या प्रसारक समाज संचलित राजर्षी शाह महाराज तंत्रनिकेतनतर्फे ऑनलाईन करिअर गाईडन्सचे आयोजन रविवारी (दि.२६) ११ वा. करण्यात आले आहे. तंत्रनिकेतनचे प्राचार्य डॉ.डी.बी. उफाडे यांच्या मार्गदर्शनाखाली इयत्ता १० वी / १२ वी नंतर पुढील योग्य वाटचालीसाठी इंजिनिअरिंग पदविका (डिप्लोमा) प्रवेशाविषयी तसेच तांत्रिक शिक्षणाचे महत्व, डिप्लोमा नंतर असणाऱ्या विविध क्षेत्रातील वाटचाली या विषयावर माहिती देण्यात येणार आहे. त्यासाठी विद्यार्थ्यांनी अगोदर नावनोंदणी करावयाची आहे. सदर उपक्रमासाठी गुगल मिट या ॲपद्वारे जॉईन व्हायचे आहे. नावनोंदणीसाठी व कार्यक्रम जॉईन करण्यासाठी खालील लिंकचा वापर करा.

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Lakshya Maharashtra, Dt. 25<sup>th</sup> July 2020 Page No.5

# लोकमत

## एमएसबीटीई परीक्षेतील गुणवताचा सत्कार

लोकमत न्यूज नेटवर्क

नाशिक : महाराष्ट्र राज्य तंत्रशिक्षण मंडळ मुंबई अंतर्गत झालेल्या अभियांत्रिकी पदविका अभ्यासक्रमाच्या २०२० परीक्षेचा निकाल जाहीर झाला असून, या परीक्षेत राजर्धी शाह महाराज तंत्रनिकेतनमध्ये प्रथम आलेल्या सर्व विभागातील विद्यार्थांचा सत्कार करण्यात आला.

राजर्धी शाह महाराज तंत्रनिकेतनमध्ये खान उमेर हा ९६,६७टक्के गण मिळवन पहिला आला. कुमारी. तर अंजली भामरे हीने ९४.००टक्के गुण मिळवून दुसरा क्रमांक तर कोमल वाळके हिने ९३.७३ टक्के गुण मिळवून महाविद्यालयात तिसरा क्रमांक पटकावला.

Hello Nashik Page No. 2 Jul 20, 2020 Powered by: erelego.com

### Lokmat, Dt: 20th July 2020 ,Page No.: 02

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## Lokmat Times Exemplary result of RSMP





has recently announced the results of the summer session examinations conducted in April-May 2020. The stu-

dents from all the departments of Rajarshi Shahu Maharaj Polytechnic, Nashik performed very well and managed to get

the students for getting good marks. Khan Umer stood first ir with 96.67 percent marks Anjali Bhamre secured

good results. Principal Dr DB Uphade appreciated

the second position with 94 percent marks and Komal Walke secured the third position in with 93.75 percent marks. MVP general secretary

Nilimatai Pawar, presi dent Dr Tushar Shewale MVP's Rajarshi Shahu Maharaj Polytechnic col lege local management committee chairman Manikrao Boraste, direc tor Sachin Pingale, educa tion officer Dr NS Pati and others congratulated students for their the achievement.

Nashik First Page No. 3 Jul 22, 2020 Powered by: erelego.com

#### Lokmat Times, 22<sup>nd</sup> July 2020, Page No.:03



### Divya Marathi, 27<sup>th</sup> July 2020, Page No.:8

## **Trending Technology: BLOCKCHAIN**



Blockchain is one of the most important technical inventions in the recent years. Blockchain is a transparent money exchange system that has transformed the way a business is conducted. Blockchain technology is normally associated with Crypto currencies

such as Bitcoin. It is a database of record of transactions which is distributed, and which is validated and maintained by a network of computers around the world. Instead of a single central authority such as a bank, the records are supervised by a large community and no individual person has control over it and no one can go back and change or erase a transaction history. As compared to a conventional centralized database, the information cannot be manipulated due to blockchain's built in distributed nature of structure and confirmed guarantees by the peers. In another words, when a normal centralized database is located on an individual server, blockchain is distributed among the users of a software.

#### What is an example of an Blockchain?

Blockchain's transparent and decentralized platform has Blockchain's transparent and decentralized platform has attracted various industries and organizations are inclining more and more towards using blockchain for various business purpose. Bank and Payment systems have started using blockchain to make their operations smoother, efficient and secure.

Funds can be efficiently and safely transferred with the decentralization technology. Blockchain has become increasingly popular in healthcare industries as it is able to restore the lost trust between the customers and healthcare provides. With the help of blockchain, authorization and identification of people have

become easier and frauds and records loss can be avoided Rigging of election results can be avoided with an effective use of blockchain. Voter registration and validation can be done using blockchain and ensure the legitimacy of votes by creating a publicly available ledger of recorded votes. Industries such as Insurance, Education, Private transport and Ride sharing, government and public benefits, retail, real estate etc. have started implementing blockchain to reduce costs, to increase transparency and to build trust.

What is the history of the Blockchain Technology? In the year 1976, a paper was released on "New Directions With the advancement in the field of Cryptography, another by Stuart Haber and Scott Stornetta which laid out the concept to timestamp



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the data instead of the medium. model proposed by David Chaum also contributed towards the development of the concept of Blockchain which was followed by Protocols such as e-cash schemes that introduced double spending detection. In 1997, Adam Back introduced another concept called This lead to the concept of creating money called as "b-money" by Wei Dai based on peer to peer network. Satoshi Nakamoto is considered as the inventor of blockchain technology when he published a paper on bitcoin. payment from one source to another source without relying on a third-party source.



in 2008 as "Bitcoin in Cryptography" discussed the concept of distributed ledger. "b-money" by Wei Dai based on peer to peer network.

Ms. Priyanka Sonawane Student-IF Dept.

#### **ARTIFICIAL INTELLIGENCE (AI)**



Artificial Intelligence is an approach to make a computer, robot, or a product to think how smart human think. And finally this study outputs intelligent software systems. the aim of AI is to improve computer functions which are related to human knowledge.

The objective of AI research is reasoning, knowledge representation, planning, learning, natural language processing, realization, and ability to move and manipulate objects. There are long-term goals in the general intelligence sector. AI is one of the fascinating and universal fields of computer science which has a great scope in future. AI holds a tendency to cause a machine to work as a human. Artificial intelligence is composed of two words Artificial and Intelligence, where Artificial defines "man-made", and intelligence defines "thinking power", hence AI means "a manmade thinking power." To create the AI first we should know that how intelligence is composed, so the intelligence is an intangible part of our brain which is a combination of Reasoning, learning, problem-solving



What is an example of an Artificial Intelligence (AI)?

With the help of AI, you can create such software or devices which can solve real- world problems very easily and with accuracy such as health issues, marketing, traffic issues, etc. Using AI can create your personal virtual Assistant, such as Cortana, Google Assistant, Siri, etc. using AI build such Robots which can work in an environment where survival of humans can be at risk. Siri and Alexa- The challenge with voice activated assistents which play an ever growing role in business is that they need to actually understand humans. Amazon and Online Commerce- The concept of a system that respond to customer input isn't by itself an example of artificial intelligence. For example, those ads for shirts that follow you around the Internet after you've casually checked out shirts aren't necessarily an advanced AI application. Pandora- For those who say that AI will replace humans, Pandora's AI system is an example of a system working with the humans. To start, Pandora employs musically astute humans to analyze categorize a song.

#### What is the history of the Artificial Intelligence?

Designed by Newell and Simon in 1955 it may be considered the first AI program. The person who finally coined the term artificial intelligence and is regarded as the father of AI is John McCarthy. The beginnings of modern AI can be traced to classical philosophers' attempts to describe human thinking as a symbolic system. But the field of AI wasn't formally founded until 1956, at a conference at Dartmouth College, in Hanover. New Hampshire, where the term "artificial intelligence" was coined. In 1956, .American computer scientist John McCarthy organized the Dartmouth Conference, at which the term 'Artificial Intelligence' was first adopted. Researchers Allen Newell and Herbert Simon were instrumental in promoting AI as a field of computer science that could transform the world.

> Mrs. S. S. Tile Lecturer-IF Dept.



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#### 6G Mobile Technology:



Although the 5G mobile communications standard is still in the early days of its deployment, ideas are starting to come to the fore to consider what the next generation, i.e. 6G mobile communications might look like.

The 6G mobile technology is the next generation wireless mobile resources and the 6G technology will surely make phenomenal changes in mobile technologies. World's first 6g research programme launched in Oulu, Finland. It increase performance and maximizes your data throughput and IOP, Protect your system and secure your data and ease your service and build efforts and expand your data configuration options.



6G mobile technology is based on set of standards which enable devices to connect internet with broadband wireless access. Complete information about this technology has not been provided yet, but some sources think that this technology will also follow the path of previous series. This technology can come as 6G mobile technology, 6G technology, 6G mobile, 6G network or 6G wiki, as these are rising and important technologies. Currently 3G and 4G are most popular around the world, as they are available on almost every mobile device today and people are obsessed with internet speed that these technologies provide.

To enhance this experience now developers are considering 5G and 6G broadband access technologies because they will deliver users more than their expectations. Because of tough competition in mobile world, everyone wants to own rights of 6G technology as soon as possible. They want to offer more to their customers to stay at number one position in market, and receive targeted sales each year. To give more than expected to their customers, they are also considered about giving new things before competitors. This fact is making them more curious about arrival and working of 6G technology. After infrared, Bluetooth and card slots, broadband internet access are outrageous technology which has just changed internet experience for users. Currently 4G technologies are offering 100 Mbps internet speed and it is also improving with time. With 6G devices are expected to move up to 1GB or even more than that. This will also improve data and voice quality with video calling and rich media. Addition to it is better security for data transmission and wireless standards. This technology will break all previous records of technologies form these series and will deliver more than expectations.

> Ms. Anjali Bhamare FYIF

#### **Business Communication**



Communication is a process by which meanings are exchanged among people through the use of words. Business Communication is a process of transmitting information and thoughts between various parts of an organization and

also to people outside the organization such as customers, investors, suppliers etc.. Communication is the essence of management. The basic functions of management are Planning; Organizing, Staffing, Directing and Controlling cannot be performed well without effective communication

Communication is a process of exchanging verbal and nonverbal messages. It is a continuous process. Prerequisite of communication is a message. This message must be conveyed through some medium to the recipient. It is essential that this message must be understood by the recipient in same terms as intended by the sender. He must respond within a time frame. Thus, communication is a two way process and is incomplete without a feedback from the recipient to the sender on how well the message is understood by him.



The main components of communication process are as follows:

Context - context may be physical, social, chronological or cultural. Sender / Encoder - Sender / Encoder is a person who sends the message, uses symbols (words or graphic or visual aids) to convey the message and produce the required response.



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Message - Message is a key idea that the sender wants to communicate. It is a sign that elicits the response of recipient. Medium - Medium is a means used to exchange / transmit the message. Recipient / Decoder - Recipient / Decoder is a person for whom the message is intended / aimed / targeted. Feedback-Feedback may be verbal or non-verbal .It may take written form also in form of memos, reports, etc.



Business Communication is goal oriented. The rules, regulations and policies of a company have to be communicated to people within and outside the organization. In early times, business communication was limited to paper-work, telephone calls etc. But now with advent of technology, we have cell phones, video conferencing, emails and satellite communication to support business communication. Effective business communication helps in building goodwill of an organization.

#### **Different Methods of Business Communication:**

Here we will discuss above different methods and modes of business communication which can be used for effective communication:

1. Verbal Communication: A way where one person transfer information to another person of the businesses orally is called as verbal communication. Examples of verbal communication includes: telephone conversations, discussion in meetings, video conferencing, etc.

2. Written Communication: When communication between two or more parties takes place through writing is called as written communication. Example of written communication includes: formal letters, posters, bulletin boards, etc.

3. Electronic Communication: Various new types of business communication are developed with the development of technologies. Example of electronic communication includes: social media, online chatting, text and email communication, websites, blogs, etc. All the points given below briefly:

Web based communication: which allow sharing information, words over a network of computers known as internet

Video conferencing: allows people in different locations to hold interactive meetings

Reports: important in documenting the activities of any department

Presentations: Popular method of communication in all types of organizations, usually involving audio visual material like copies of reports or material prepared in Microsoft PowerPoint or Adobe Flash

Telephone Meetings: Which allow for long distance speech?

Forum boards: which allow people to instantly post information at a centralized location?

Face –to-face meetings: which are personal and should have a written follow up?

Suggestion box: primarily for upward communication because some people may hesitate to communicate with management directly, so they can give suggestions by drafting one and putting it in the suggestion box Letters: brief messages sent to recipients that are often outside the organization

Memos: letters to members of a company or organization The Importance of Business Communication:

Increased Productivity: The success of any project is dependent upon the ability of staff members to collaborate, and effective business communication is the key to successful teamwork. This promotes understanding and builds trust between the employers and the staffs. That's one importance of business communication.

Help Grow Customer Base: Effective external communication can help Communication plays a crucially important role in all aspects of а business. Business Communications may be in-house or external. With internal communication, you are dealing with staff in meetings or via such written messages as emails and text messages. With external communicating, you are dealing with suppliers, clients or other businesses.

**Improve Business Partnership**: Another importance of effective communication in business is improved partnership. Communication is crucial when dealing with suppliers and other external business contacts. Sometimes suppliers need to be regularly updated on all the products so they can determine areas that they need to improve.

**Facilitate Business Innovations**: The final importance of effective business communication is that with it help facilitate business innovation. If both the employers and staff oversee communicate well, the advantages are twofold.

Mrs. S. V. Malode Lecturer - Science and Humanity



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#### **Internet of Things**



In the past years, we have seen how hackers have turned to unsecure Internet of Things (IoT) devices to create an extensive botnet which then they could use to push enough traffic to take down Dyn, the DNS provider.

A quick look at the news tells us that not much has been learned. However, the great number of security breaches occurred during 2018 should serve as an alert of what can happen at a global scale in 2019 if organizations don't take the necessary precautions.

Analyst firm Gartner forecasts that 20.4 billion connected things will be in use worldwide by 2020. And with the rise of autonomous things I will call this the Internet of Autonomous Things (IoAT) there is a good chance that many of these things will show a certain level of weak security. It will be paramount for IoT manufacturers and all of their supply chain to dramatically increase the security in all the products that come out to market. It can be a connected refrigerator, a robot, a drone, a vehicle, or a health tracker.

Challenges in coexistence are well-known to mobile phone manufactures and laptop/tablet manufacturers. However, they are often new to IoT developers. Coexistence must not be overlooked while designing systems that have collocated Wi-Fi and Bluetooth. In this article, we will talk about challenges in coexistence, methods that are adapted to address the issue, and best practices that can help both Wi-Fi and Bluetooth perform well while sitting next to each other.

Manufacturers must implement a level of security that keeps hackers at bay. Otherwise, there is a good chance we are going to witness a global IoT security breach ahead. Many "things" are now being built with WiFi connectivity, meaning they can be connected to the Internet-and to each other. Hence, the Internet of Things, or IoT. The Internet of Things is the future and has already enabled devices, home appliances, cars, and much more to be connected to and exchange data over the Internet. And we're only in the beginning stages of IoT: the number of IoT devices reached 8.4 billion in 2017 is expected to reach 30 billion devices by 2020. We can lock our doors remotely if we forget to when we leave for work and preheat our ovens on our way home from work, all while tracking our fitness on our Fit bits and hailing a ride with Lift. But businesses also have

much to gain now and in the near future. It can enable predictive maintenance, speed up medical care, improve customer service, and offer benefits we haven't even imagined yet. However, despite this boon in the development and adoption of IoT, experts say not enough IT professionals are getting trained for IoT jobs. An article at ITPro Today says we'll need 200,000 more IT workers that aren't yet in the pipeline, and that a survey of engineers found 25.7 percent believe inadequate skill levels to be the industry's biggest obstacle to growth. For someone interested in a career in IoT, that means easy entry into the field if you're motivated, with a range of options for getting started. Skills needed include IoT security, cloud computing knowledge, data analytics, automation, understanding of embedded systems, device knowledge, to name only a few. After all, it's the Internet of Things, and those things are many and varied, meaning the skills needed are as well.

> Mr. Mayur Sonawane TYEJ

#### **Internet of Things standard I4.0:**



Machine vision is a term commonly used for embedded vision systems operating in an industrial context. There are several high-level trends facing most machine vision applications today:

Ubiquity of machine vision

Embedding intelligence from machine learning at the edge Open, high-level languages and frameworks

Multi-level, multi-factor security The ubiquity of machine vision is closely coupled to what has been termed Industry 4.0 by some leading industry figures. This is due to the economic benefits of including machine vision within the manufacturing flow, as it allows for new assembly and inspection methodologies coupled with improved logistical and workflow tracking. This added capability brings with it not only increased yields but also reduced throughput times, which offset the cost of an embedded vision implementation. The rapid adoption of machine vision in manufacturing brings with it several technology challenges that are driving demand for increased frame rate, resolution, wider connectivity bandwidth, smaller form factors, and lower cost as applications increase.



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To aid the development and implementation of intelligence at the edge, machine vision developers leverage open-source, high-level languages and frameworks such as OpenCV and OpenVX for image processing, and Caffe for machine intelligence. These frameworks enable algorithm development time to be greatly reduced and allow the developer to focus on value-added, market-distinguishing activities.

Architectural choices

Considering the high-level architecture of a machine vision system, the following system elements have been identified:

Lens and lighting solution to allow the image to be focused and illuminated

Camera to capture the image

High-speed interconnect to transfer the image

PC with frame grabber and application software or storage

Until recently, the traditional approach has been to develop machine vision systems around a PC-based architecture due to the ease of deployment, large ecosystem of software vendors, and low cost of implementation. However, there are also several disadvantages to PC architectures, namely their low performance when compared to alternative solutions, large footprint, higher power dissipation, and the fact that they are not easily scalable as demanded by Industry 4.0. A second approach is to use GPU acceleration within a

PC-based architecture; this application has similar advantages to that of a PC-based application. While this does enable faster prototyping of the machine vision algorithms using high-level frameworks, it also comes with an increase in power dissipation over and above that required by a PC-based solution and requires expertise in the implementation of the algorithms on the GPU. Further, it still presents issues regarding scalability.

With both a PC- and GPU-based approach it is difficult to implement processing at the edge, although there is a final architectural approach that enables such a move and provides considerable benefits in the size, weight, power, and cost (SWaP-C) of the machine vision system.

The final architectural approach is a fully integrated system that implements the machine vision system using programmable logic and traditional embedded processors. These devices combine high-performance ARM Cortex-A53 or Cortex-A9 processors with programmable logic, enabling the development of a custom image processing pipeline to implement the machine vision algorithms required to enable intelligence at the edge.

Connectivity

For the designer, it provides the ability to:

Interface to any image sensor

Interface to any camera

Interface to any downstream display or communication protocol

Convert from one standard to another

These capabilities provide the developer with both the ability to achieve current interface requirements, and to implement future upgrades and introduce new interface standards as a product roadmap evolves. For example, depending on changes at the physical layer, it may be possible to implement revisions to a currently used protocol by remotely updating the programming file.

This higher level of abstraction is required to achieve the maximum benefit from an SoC that facilitates the use of industry standard frameworks and libraries.

Prof. N. A. Gade Lecturer - E & TC Dept.

#### **Regenerative Brake**



Regenerative braking is an energy recovery mechanism that slows down a moving vehicle or object by converting its kinetic energy into a form that can be either used immediately or stored until needed.

In this mechanism, the electric traction motor uses the vehicle's momentum to recover energy that would otherwise be lost to the brake discs as heat. This contrasts with conventional braking systems, where the excess kinetic energy is converted to unwanted and wasted heat due to friction in the brakes, or with dynamic brakes, where the energy is recovered by using electric motors as generators but is immediately dissipated as heat in resistors. In addition to improving the overall efficiency of the vehicle, regeneration can significantly extend the life of the braking system as the mechanical parts will not wear out very quickly.

Conversion to electric energy: the motor as a generator

Electric motors, when used in reverse, function as generators and will then convert mechanical energy into electrical energy. Vehicles propelled by electric



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motors use them as generators when using regenerative braking, braking by transferring mechanical energy from the wheels to an electrical load.

Early examples of this system were the front-wheel drive conversions of horse-drawn cabs by Louis Antoine Krieger in Paris in the 1890s. The Krieger electric landaulet had a drive motor in each front wheel with a second set of parallel windings (bifilar coil) for regenerative braking. In England, "automatic regenerative control" was introduced to tramway operators by John S. Raworth's Traction Patents 1903-1908, offering them economic and operational benefits as explained in some detail by his son Alfred Raworth. These included tramway systems at Devonport (1903), Rawtenstall, Birmingham, Crystal Palace-Croydon (1906), and many others. Slowing the speed of the cars or keeping it in control on descending gradients, the motors worked as generators and braked the vehicles. The tram cars also had wheel brakes and track slipper brakes which could stop the tram should the electric braking systems fail. In several cases the tram car motors were shunt wound instead of series wound, and the systems on the Crystal Palace line utilized series-parallel controllers.Following a serious accident at Rawtenstall, an embargo was placed on this form of traction in 1911; the regenerative braking system was reintroduced twenty years later.

#### Comparison of dynamic and regenerative brakes

What are described as dynamic brakes ("rheostatic brakes" in British English) on electric traction systems, unlike regenerative brakes, dissipate electric energy as heat rather than using it, by passing the current through large banks of resistors. Vehicles that use dynamic brakes include forklift trucks, dieselelectric locomotives, and trams. This heat can be used to warm the vehicle interior, or dissipated externally by large radiator-like cowls to house the resistor banks.

General Electric's experimental 1936 steam turbine locomotives featured true regeneration. These two locomotives ran the steam water over the resistor packs, as opposed to air cooling used in most dynamic brakes. This energy displaced the oil normally burned to keep the water hot, and thereby recovered energy that could be used to accelerate again.<sup>1</sup> The main disadvantage of regenerative brakes when compared with dynamic brakes is the need to closely match the generated current with the supply characteristics and increased maintenance cost of the lines. With DC supplies, this requires that the voltage be closely controlled. The AC power supply and frequency converter pioneer Miro Zorič and his first AC power electronics have also enabled this to be possible with AC supplies the supply frequency must also be matched (this mainly applies to locomotives where an AC supply is rectified for DC motors)



#### **Regenerative Braking Applications**

The applications of this braking system include the following.

- Electric Vehicles
- DC Motors
- Induction Motors
- Electric Traction

Advantages and Disadvantages of Regenerative Braking

The advantages include the following.

- This braking system will increase the vehicle's fuel economy.
  - It permits for conventional brakes based on friction.
  - It extends the battery charge.

The disadvantages include the following.

Extra apparatus is necessary to manage the regeneration

Maintenance cost is high for protecting the apparatus as well as machines.

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#### VSC based HVDC Power Transmission System



VSC based HVDC transmission is one of the HVDC conformation. Their high efficiency, compact size, high reliability, short installation and appointing period and low operating and maintenance cost make it

suitable choice for HVDC transmission. The HVDC system with power converter acts as a backbone and provides high reliability with a long useful life to support the AC electrical system. The power conversion i.e. rectification or inversion is achieved by electronic switches which is controllable in a 3-phase bridge structure.

#### Introduction:

The growing number of HVDC transmission links in forthcoming power system, forces the thoughtful dares on power system control and stability analysis. While better controllability and improvement of inclusive power-system stability is offer by some of HVDC systems, But due to these system various problems on ac bus like simultaneous commutation disappointment of converters, small signal swinging therefore harm voltage quality or cause high above-voltage of bus bar, this all are the local instability's in the system. The increase in voltage level is not always feasible in AC transmission. The movement of power in AC transmission depends on difference of phase angle in vector voltage that varies with the load demand. To investigate the flora and reasons of all this uncertainties, suitable investigative representations of power systems and HVDC links are essential. Today thyristor and thermistor are available in the high power converters technology, which can be called as the fully controlled semiconductor technology. In the converter which is based on voltage source these technology are adopted appropriately. The technologies associated with the flexible ac transmission system (FACTS) and HVdc power transmission systems carry on towards advancement as they having various challenges in the commercial applications. HVdc and FACTS schemes are supporting to the recent power system in their own way, and these are the important skills, in many cases, these schemes are fully or moderately derestricted in several nations. Insulated gate bipolar transistor (IGBTs) and gate turn-off thyristors (GTOs) are used in the forced-commutated VSCs .some times IGBTs are

used in the most industrial cases. Figure 2 shows the VSC-HVdc configuration with the IGBT converter connected in back to back topology. This technology is deep-rooted technology for intermediate power levels.



Figure 1: HVDC system based on VSC technology built with IGBTs.

#### VSC-HVDC power transmission concepts:

Characteristically, in order to distribute a higher blocking voltage competence for the converter, many IGBTs are series-connected which is used for each semiconductor shown in figure 7, and consequently increase the HVdc systems dc bus voltage level. Likewise to guaranties the converter operation of four quadrant an antiparallel diode are required. Also to control the power flow of the system and dc harmonics which introduced in the system can be filtered by using capacitor which is connected in dc bus. That capacitor mainly provides the storage which is necessary for filtering and power flow.



Figure 2: Conventional three-phase two-level VSC topology.

#### Feedback control system modeling:

For the development of complete power system the feedback control system model is necessary to develop. This model is the ac hybrid model, which consist of 3 synchronous machines with the different ratings. The ac network hybrid model means that the model is divided into two parts, specifically, the dynamic and static parts. The part where HVdc converter is not connected is the static part which is the part of the ac network. In static area, the ac components are demonstrated in phasor theory using as constant admittances. The HVDC



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converter comes under dynamic area or else dynamic part, that HVdc system is surrounded with the ac components which include transformers, ac power lines that are demonstrated animatedly via the space vector theory. The voltage source converter (VSC) is the prime unit of a VSC based HVDC system; therefore, its design and performance evaluation is most important to have desired results. This chapter deals with design, modeling and control of VSC for back-to-back AC interconnection and long distanced transmission between two AC networks using HVDC system.



## Figure 3: Interconnection of two ac voltage sources through a lossless reactor.

To justify the direction of active power, two voltages are generated and comparative results decides the direction of the flow of active power, where the one voltage is generated by the VSC and the other one is the ac system voltage. At the fundamental frequency, the phasor relationship defines the active and reactive powers, pretentious is that the ac system reactor connected between the converters is ideal that is lossless,  $\delta$  is the phase angle between the Vr at the fundamental frequency and the voltage phasors Vs.

#### Mrs. P. A. Shinde Lecturer- Electrical Engineering Department

#### Augmented Reality



Augmented Reality is a technology that takes the world around you and adds virtual content on top such that it looks like it's actually there in the real world. While there are a number of different types of AR, perhaps the

most engaging and exciting form uses fancy computer algorithms to analyses camera images looking for pictures to bring to life. This is called vision-based augmented reality and it's at the heart of most modern AR apps, such as Zappar. These apps are supercarefully crafted so they can analyses at least 30 images every second, giving the user a fluid and rich 3D experience. In the past the sheer computing power needed to augment reality wasn't very accessible - it was pretty expensive! While this made it difficult for consumers to adopt AR, it did see a good number of business and military uses. From automotive design to aircraft assembly, architecture to archaeology, fighterjets to medicine, it's made it easier and more efficient for people to do their jobs. As more powerful personal computers with webcams emerged, consumer friendly AR became more of a reality. It began to be used by brands and their agencies in marketing campaigns, with early adopters including the likes of Coca-Cola and Marvel. To run these PC-based experiences users had to download the AR application to their desktop. While there was a degree of novelty about these experiences, being tethered to a laptop or large screen meant the potential consumer application was limited.

This was a 'game changer' for the technology as smartphone prices tumbled, penetration grew exponentially worldwide and the app store reinvented whole industries. Augmented Reality on mobile begins a new era of connectivity between the physical world and digital devices, opening up a hidden world of additional content in the things we see around us. It takes the experience of looking down at your phone, disconnected from the everyday, and makes you look up and see the world with a different lens.

#### Prof. P. N. Patil Department of Computer Technology

#### **Artificial Intelligence**



In Computer science artificial intelligence (AI) sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and animals.

Leading AI defines the field as the study of "Intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals. Colloquially, the term artificial



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intelligence is often used to describe machines (or computers) that mimic cognitive functions that humans associate with the human mind, such as learning and problem solving. AI existed even before the internet was born, but it is now that the data processing and compute power backbone became strong enough to sustain an entire technology by itself.

AI is everywhere today, from your smartphones to your cars to your home to your banking establishment.

It is the new normal, something the world cannot do without. Artificial Intelligence (AI) is the technology used for equipping computer systems with the ability to make decisions like humans. When AI programs are fed to systems, the aim is to mimic human intelligence for performing complex tasks such as pattern recognition, speech recognition, weather forecast and medical diagnosis.

AI is used in navigation based applications like Uber, voice assistants like Siri, video streaming services like Netflix, IoT devices and in search engines like Google and Bing. AI helps in automating tasks such as traffic, scheduling trains, making business predictions and designing driverless cars!

By 2030, AI automation is expected to create more than 70 million jobs. The sad fact is that AI might wipe out more than 23 million jobs by the same time frame. AI will create jobs in areas such as testing, support, maintenance, programming and data science.

#### Applications of Artificial Intelligence (AI): 1) Health Care

Artificial intelligence is assisting doctors. According to Bloomberg Technology, Microsoft has developed AI to help doctors find the right treatments for cancer. There is a great amount of research and drugs developed relating to cancer.

#### 2) Automotive

Advancements in AI have contributed to the growth of the automotive industry through the creation and evolution of self-driving vehicles. As of 2016, there are over 30 companies utilizing AI into the creation of selfdriving cars. A few companies involved with AI include Tesla, Google, and Apple.

#### 3) Cyber security

The cyber security arena faces significant challenges in the form of large-scale hacking attacks of different types that harm organizations of all kinds and create billions of dollars in business damage. Artificial intelligence and Natural Language Processing (NLP) has begun to be used by security companies - for example, SIEM (Security Information and Event Management) solutions.

> Ms. Drishti Shah SYCM

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